

Appendix G

Summary of Soil and Sediment Data



Packaging Samples for Shipment to Off-Site Laboratories

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Appendix G-1
Summary of Soil and Aquatic Sediment
Guidelines and Standards

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Table G-1A
Eastern U.S.A. Background Concentrations for Soils^a

Analyte	Units	Eastern U.S.A. Background Concentrations for Soil
Aluminum	mg/kg (ppm)	33,000
Antimony	mg/kg (ppm)	--
Arsenic	mg/kg (ppm)	3–12 ^b
Barium	mg/kg (ppm)	15–600
Beryllium	mg/kg (ppm)	0–1.75
Cadmium	mg/kg (ppm)	0.1–1.0
Calcium	mg/kg (ppm)	130–35,000
Chromium	mg/kg (ppm)	1.5–40 ^b
Cobalt	mg/kg (ppm)	2.5–60 ^b
Copper	mg/kg (ppm)	1–50
Iron	mg/kg (ppm)	2,000–550,000
Lead	mg/kg (ppm)	4–61 ^c
Magnesium	mg/kg (ppm)	100–5,000
Manganese	mg/kg (ppm)	50–5,000
Mercury	mg/kg (ppm)	0.001–0.2
Nickel	mg/kg (ppm)	0.5–25
Potassium	mg/kg (ppm)	8,500–43,000 ^b
Selenium	mg/kg (ppm)	0.1–3.9
Silver	mg/kg (ppm)	--
Sodium	mg/kg (ppm)	6,000–8,000
Thallium	mg/kg (ppm)	--
Vanadium	mg/kg (ppm)	1–300
Zinc	mg/kg (ppm)	9–50

-- No reference level available for these analytes

^a Source: New York State Department of Environmental Conservation “Technical and Administrative Guidance Memorandum (TAGM) #4046”

^b New York State background

^c Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4–61 ppm. Average background levels in metropolitan or suburban areas, or near highways are much higher and typically range from 200–500 ppm.

Table G-1B
Screening Concentrations for Contaminated Sediments^a

Analyte	Units	Lowest Effect Level ^b	Severe Effect Level ^c
Aluminum	mg/kg (ppm)	--	--
Antimony	mg/kg (ppm)	2.0 (L)	25 (L)
Arsenic	mg/kg (ppm)	6.0 (P)	33 (P)
Barium	mg/kg (ppm)	--	--
Beryllium	mg/kg (ppm)	--	--
Cadmium	mg/kg (ppm)	0.6 (P)	9 (L)
Calcium	mg/kg (ppm)	--	--
Chromium	mg/kg (ppm)	26.0 (P)	110 (P)
Cobalt	mg/kg (ppm)	--	--
Copper	mg/kg (ppm)	16.0 (P)	110 (P)
Iron	%	2.0 (P)	4 (P)
Lead	mg/kg (ppm)	31.0 (P)	110 (L)
Magnesium	mg/kg (ppm)	--	--
Manganese	mg/kg (ppm)	460 (P)	1,100 (L)
Mercury	mg/kg (ppm)	0.15 (L)	1.3 (L)
Nickel	mg/kg (ppm)	16.0 (P)	50 (L)
Potassium	mg/kg (ppm)	--	--
Selenium	mg/kg (ppm)	--	--
Silver	mg/kg (ppm)	1.0 (L)	2.2 (L)
Sodium	mg/kg (ppm)	--	--
Thallium	mg/kg (ppm)	--	--
Vanadium	mg/kg (ppm)	--	--
Zinc	mg/kg (ppm)	120 (P/L)	270 (L)

-- No reference value available for these analytes

^a Source: New York State Department of Environmental Conservation "Technical Guidance for Screening Contaminated Sediments," January 1999

^b The Lowest Effect Level for each metal is the lowest of the either the Persaud et al. (1992) Lowest Effect Level or the Long and Morgan (1990) Effect Range-Low

^c The Severe Effect Level for each metal is the lowest of either the Persaud et al. (1992) Severe Effect Level or the Long and Morgan (1990) Effect Range-Moderate

L - An "L" following a criterion indicates that it was taken from Long and Morgan (1990).

P - A "P" following a criterion indicates that it was taken from Persaud et al. (1992).

Table G-1C
Screening Thresholds for In-Water and Riparian Management of Sediment and Dredge Material^a

Analyte	Units	No Appreciable Contamination Level
Arsenic	mg/kg (ppm)	14
Cadmium	mg/kg (ppm)	<1.2
Copper	mg/kg (ppm)	<33
Lead	mg/kg (ppm)	<33
Mercury	mg/kg (ppm)	0.17

^a Source: Draft New York State Department of Environmental Conservation Technical and Operational Guidance Series (TOGs) #5.1.9, "In-Water and Riparian Management of Sediment and Dredge Material"

Appendix G-2
Soil and Sediment Data

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Table G-2A
2002 Radioactivity Concentrations ($\mu\text{Ci/g}$ dry weight from upper 5 cm) and
Metals Concentrations (mg/kg dry) in On-Site Soils
Downstream of the WVDP at Frank's Creek (SNSP006)

Analyte	Units	N	SNSP006	Guidance Values		
				Lowest Effect Level ^a	Severe Effect Level ^a	No Appreciable Contamination Level ^b
Gross Alpha	$\mu\text{Ci/g}$	1	1.16 \pm 0.34E-05	--	--	--
Gross Beta	$\mu\text{Ci/g}$	1	3.44 \pm 0.39E-05	--	--	--
K-40	$\mu\text{Ci/g}$	1	1.58 \pm 0.20E-05	--	--	--
Co-60	$\mu\text{Ci/g}$	1	1.02 \pm 1.88E-08	--	--	--
Sr-90	$\mu\text{Ci/g}$	1	8.69 \pm 1.03E-07	--	--	--
Cs-137	$\mu\text{Ci/g}$	1	9.26 \pm 1.29E-06	--	--	--
U-232	$\mu\text{Ci/g}$	1	1.60 \pm 2.56E-08	--	--	--
U-233/234	$\mu\text{Ci/g}$	1	6.52 \pm 0.89E-07	--	--	--
U-235/236	$\mu\text{Ci/g}$	1	4.46 \pm 2.41E-08	--	--	--
U-238	$\mu\text{Ci/g}$	1	6.07 \pm 0.86E-07	--	--	--
Total U	$\mu\text{g/g}$	1	2.30 \pm 0.04E+00	--	--	--
Pu-238	$\mu\text{Ci/g}$	1	3.43 \pm 1.74E-08	--	--	--
Pu-239/240	$\mu\text{Ci/g}$	1	1.27 \pm 1.67E-08	--	--	--
Am-241	$\mu\text{Ci/g}$	1	3.92 \pm 2.19E-08	--	--	--
Aluminum	mg/kg	1	8,060	--	--	--
Antimony	mg/kg	1	<0.24	2.0	25	--
Arsenic	mg/kg	1	7.2	6.0	33	14
Barium	mg/kg	1	69.3	--	--	--
Beryllium	mg/kg	1	0.42	--	--	--
Cadmium	mg/kg	1	0.14	0.6	9	<1.2
Calcium	mg/kg	1	15,950	--	--	--
Chromium	mg/kg	1	11.2	26	110	--
Cobalt	mg/kg	1	11.85	--	--	--
Copper	mg/kg	1	17.6	16.0	110	<33
Iron	%	1	0.02	2.0	4	--
Lead	mg/kg	1	13.0	31.0	110	<33
Magnesium	mg/kg	1	6,100	--	--	--
Manganese	mg/kg	1	750	460	1100	--
Mercury	mg/kg	1	<0.02	0.15	1.3	0.17
Nickel	mg/kg	1	22.1	16.0	50.0	--
Potassium	mg/kg	1	1,415	--	--	--
Selenium	mg/kg	1	<0.36	--	--	--
Silver	mg/kg	1	<0.06	1.0	2.2	--
Sodium	mg/kg	1	88.4	--	--	--
Thallium	mg/kg	1	<0.32	--	--	--
Vanadium	mg/kg	1	15.4	--	--	--
Zinc	mg/kg	1	59.5	120	270	--

N - Number of samples

-- No reference standard available

^a Screening guidelines for chemical constituents obtained from NYSDEC "Technical Guidance for Screening Contaminated Sediments"

^b NYSDEC: Draft Technical and Operational Guidance Series 5.1.9, "In-Water and Riparian Management of Sediment and Dredge Material," January 2003.

Note: Effects of radiological substances are addressed with the evaluation of radiological dose to biota (see Chapter 2 [p. 2-38]).

Table G-2B
2002 Radioactivity Concentrations ($\mu\text{Ci/g}$ dry weight from upper 5 cm) and
Metals Concentrations (mg/kg dry) in On-Site Soils
From North Swamp (SNSW74A)

Analyte	Units	N	SNSW74A	Reference Value ^a
Gross Alpha	$\mu\text{Ci/g}$	1	1.19 \pm 0.28E-05	--
Gross Beta	$\mu\text{Ci/g}$	1	1.92 \pm 0.29E-05	--
K-40	$\mu\text{Ci/g}$	1	1.22 \pm 0.16E-05	--
Co-60	$\mu\text{Ci/g}$	1	-1.13 \pm 2.11E-08	--
Sr-90	$\mu\text{Ci/g}$	1	2.06 \pm 0.32E-07	--
Cs-137	$\mu\text{Ci/g}$	1	1.59 \pm 0.20E-06	--
U-232	$\mu\text{Ci/g}$	1	0.56 \pm 1.30E-08	--
U-233/234	$\mu\text{Ci/g}$	1	4.69 \pm 0.64E-07	--
U-235/236	$\mu\text{Ci/g}$	1	3.79 \pm 1.96E-08	--
U-238	$\mu\text{Ci/g}$	1	5.21 \pm 0.67E-07	--
Total U	$\mu\text{g/g}$	1	1.77 \pm 0.03E+00	--
Pu-238	$\mu\text{Ci/g}$	1	0.62 \pm 6.07E-09	--
Pu-239/240	$\mu\text{Ci/g}$	1	2.38 \pm 1.55E-08	--
Am-241	$\mu\text{Ci/g}$	1	4.07 \pm 1.85E-08	--
Aluminum	mg/kg	1	8,330	33,000
Antimony	mg/kg	1	<0.32	--
Arsenic	mg/kg	1	5.8	3–12 ^b
Barium	mg/kg	1	56.3	15–600
Beryllium	mg/kg	1	0.35	0–1.75
Cadmium	mg/kg	1	0.18	0.1–1.0
Calcium	mg/kg	1	20,300	130–35,000
Chromium	mg/kg	1	11.1	1.5–40 ^b
Cobalt	mg/kg	1	5.6	2.5–60 ^b
Copper	mg/kg	1	19.7	1–50
Iron	mg/kg	1	14,900	2,000–550,000
Lead	mg/kg	1	13.7	4–61 ^c
Magnesium	mg/kg	1	4,490	100–5,000
Manganese	mg/kg	1	382	50–5,000
Mercury	mg/kg	1	0.03	0.001–0.2
Nickel	mg/kg	1	13.8	0.5–25
Potassium	mg/kg	1	1,230	8,500–43,000 ^b
Selenium	mg/kg	1	<0.51	0.1–3.9
Silver	mg/kg	1	<0.07	--
Sodium	mg/kg	1	172	6,000–8,000
Thallium	mg/kg	1	<0.46	--
Vanadium	mg/kg	1	14.5	1–300
Zinc	mg/kg	1	99.9	9–50

N - Number of samples

-- No reference standard available for these analytes

^a NYSDEC: Technical and Administrative Guidance Memorandum (TAGM) #4046.

^b New York State background

^c Background levels vary widely. Average levels in undeveloped rural areas may range from 4–61 ppm (reported here). Average background levels in metropolitan or suburban areas, or near highways are much higher and typically range from 200–500 ppm.

Note: Effects of radiological substances are addressed with the evaluation of radiological dose to biota (see Chapter 2 [p. 2-38]).

Table G-2C
2002 Radioactivity Concentrations ($\mu\text{Ci/g}$ dry weight from upper 5 cm) and
Metals Concentrations (mg/kg dry) in On-Site Soils
From Northeast Swamp (SNSWAMP)

Analyte	Units	N	SNSWAMP	Reference Value ^a
Gross Alpha	$\mu\text{Ci/g}$	1	2.26 \pm 0.42E-05	--
Gross Beta	$\mu\text{Ci/g}$	1	5.89 \pm 0.46E-05	--
K-40	$\mu\text{Ci/g}$	1	2.04 \pm 0.24E-05	--
Co-60	$\mu\text{Ci/g}$	1	1.94 \pm 2.68E-08	--
Sr-90	$\mu\text{Ci/g}$	1	2.35 \pm 0.10E-06	--
Cs-137	$\mu\text{Ci/g}$	1	2.19 \pm 0.22E-05	--
U-232	$\mu\text{Ci/g}$	1	0.40 \pm 2.19E-08	--
U-233/234	$\mu\text{Ci/g}$	1	7.94 \pm 0.95E-07	--
U-235/236	$\mu\text{Ci/g}$	1	3.95 \pm 2.17E-08	--
U-238	$\mu\text{Ci/g}$	1	7.98 \pm 0.95E-07	--
Total U	$\mu\text{g/g}$	1	2.88 \pm 0.05E+00	--
Pu-238	$\mu\text{Ci/g}$	1	4.17 \pm 0.71E-07	--
Pu-239/240	$\mu\text{Ci/g}$	1	6.30 \pm 0.87E-07	--
Am-241	$\mu\text{Ci/g}$	1	1.13 \pm 0.13E-06	--
Aluminum	mg/kg	1	13,300	33,000
Antimony	mg/kg	1	0.4	--
Arsenic	mg/kg	1	10.4	3–12 ^b
Barium	mg/kg	1	84.2	15–600
Beryllium	mg/kg	1	0.62	0–1.75
Cadmium	mg/kg	1	0.17	0.1–1.0
Calcium	mg/kg	1	4,800	130–35,000
Chromium	mg/kg	1	16.5	1.5–40 ^b
Cobalt	mg/kg	1	10.1	2.5–60 ^b
Copper	mg/kg	1	26.4	1–50
Iron	mg/kg	1	26,600	2,000–550,000
Lead	mg/kg	1	22.6	4–61 ^c
Magnesium	mg/kg	1	5,110	100–5,000
Manganese	mg/kg	1	640	50–5,000
Mercury	mg/kg	1	0.04	0.001–0.2
Nickel	mg/kg	1	23.9	0.5–25
Potassium	mg/kg	1	2,040	8,500–43,000 ^b
Selenium	mg/kg	1	0.52	0.1–3.9
Silver	mg/kg	1	<0.05	--
Sodium	mg/kg	1	79.4	6,000–8,000
Thallium	mg/kg	1	<0.34	--
Vanadium	mg/kg	1	21.3	1–300
Zinc	mg/kg	1	98.6	9–50

N - Number of samples

-- No reference standard available for these analytes

^a NYSDEC: Technical and Administrative Guidance Memorandum (TAGM) #4046.

^b New York State background

^c Background levels vary widely. Average levels in undeveloped rural areas may range from 4–61 ppm (reported here). Average background levels in metropolitan or suburban areas, or near highways are much higher and typically range from 200–500 ppm.

Table G-2D
2002 Radioactivity Concentrations ($\mu\text{Ci/g}$ dry weight from upper 5 cm)
in Surface Soils Collected at Air Stations Around the WVDP as Compared to
Background Locations

Analyte	Units	N	SFBOEHN	SFRSPRD	Background Locations	
					SFGRVAL	SFNASHV
Gross Alpha	$\mu\text{Ci/g}$	1	1.10 \pm 0.32E-05	6.51 \pm 2.16E-06	6.81 \pm 2.22E-06	2.94 \pm 1.50E-06
Gross Beta	$\mu\text{Ci/g}$	1	1.63 \pm 0.20E-05	1.64 \pm 0.18E-05	1.81 \pm 0.19E-05	1.04 \pm 0.15E-05
K-40	$\mu\text{Ci/g}$	1	1.43 \pm 0.06E-05	1.34 \pm 0.16E-05	1.13 \pm 0.13E-05	1.56 \pm 0.16E-05
Co-60	$\mu\text{Ci/g}$	1	0.20 \pm 1.42E-08	-0.32 \pm 1.26E-08	0.37 \pm 1.41E-08	0.55 \pm 1.31E-08
Sr-90	$\mu\text{Ci/g}$	1	1.02 \pm 0.20E-07	9.89 \pm 2.10E-08	1.95 \pm 0.23E-07	0.68 \pm 2.30E-08
Cs-137	$\mu\text{Ci/g}$	1	4.33 \pm 0.30E-07	8.36 \pm 0.91E-07	7.81 \pm 1.02E-07	5.71 \pm 2.30E-08
U-232	$\mu\text{Ci/g}$	1	-2.82 \pm 2.96E-08	0.63 \pm 2.45E-08	-0.48 \pm 1.33E-08	^a
U-233/234	$\mu\text{Ci/g}$	1	8.00 \pm 1.11E-07	7.68 \pm 1.17E-07	8.48 \pm 1.19E-07	^a
U-235/236	$\mu\text{Ci/g}$	1	3.34 \pm 2.53E-08	6.88 \pm 3.65E-08	4.28 \pm 2.66E-08	^a
U-238	$\mu\text{Ci/g}$	1	8.32 \pm 1.13E-07	7.95 \pm 1.19E-07	7.60 \pm 1.12E-07	^a
Total U	$\mu\text{g/g}$	1	1.88 \pm 0.03E+00	2.54 \pm 0.05E+00	2.43 \pm 0.04E+00	^a
Pu-238	$\mu\text{Ci/g}$	1	0.00 \pm 3.95E-09	9.18 \pm 7.35E-09	0.00 \pm 3.16E-09	2.95 \pm 4.08E-09
Pu-239/240	$\mu\text{Ci/g}$	1	1.71 \pm 1.11E-08	1.83 \pm 1.75E-08	2.41 \pm 1.97E-08	0.00 \pm 7.06E-09
Am-241	$\mu\text{Ci/g}$	1	3.18 \pm 2.79E-08	2.53 \pm 2.66E-08	2.91 \pm 2.70E-08	0.00 \pm 9.65E-09

Analyte	Units	N	SFFXVRD	SFRT240	Background Locations	
					SFGRVAL	SFNASHV
Gross Alpha	$\mu\text{Ci/g}$	1	4.10 \pm 1.98E-06	7.62 \pm 2.33E-06	6.81 \pm 2.22E-06	2.94 \pm 1.50E-06
Gross Beta	$\mu\text{Ci/g}$	1	1.17 \pm 0.17E-05	1.38 \pm 0.16E-05	1.81 \pm 0.19E-05	1.04 \pm 0.15E-05
K-40	$\mu\text{Ci/g}$	1	1.13 \pm 0.12E-05	1.32 \pm 0.15E-05	1.13 \pm 0.13E-05	1.56 \pm 0.16E-05
Co-60	$\mu\text{Ci/g}$	1	-1.03 \pm 1.76E-08	-0.14 \pm 1.29E-08	0.37 \pm 1.41E-08	0.55 \pm 1.31E-08
Sr-90	$\mu\text{Ci/g}$	1	1.36 \pm 0.25E-07	3.66 \pm 2.42E-08	1.95 \pm 0.23E-07	0.68 \pm 2.30E-08
Cs-137	$\mu\text{Ci/g}$	1	5.94 \pm 0.68E-07	1.27 \pm 0.27E-07	7.81 \pm 1.02E-07	5.71 \pm 2.30E-08
Pu-238	$\mu\text{Ci/g}$	1	4.14 \pm 6.04E-09	1.48 \pm 5.03E-09	0.00 \pm 3.16E-09	2.95 \pm 4.08E-09
Pu-239/240	$\mu\text{Ci/g}$	1	3.44 \pm 1.73E-08	5.94 \pm 8.72E-09	2.41 \pm 1.97E-08	0.00 \pm 7.06E-09
Am-241	$\mu\text{Ci/g}$	1	3.30 \pm 1.61E-08	1.64 \pm 1.21E-08	2.91 \pm 2.70E-08	0.00 \pm 9.65E-09

N - Number of samples

^a SFNASHV location not analyzed for Uranium isotopes

Table G-2D (concluded)
2002 Radioactivity Concentrations ($\mu\text{Ci/g}$ dry weight from upper 5 cm)
in Surface Soils Collected at Air Stations Around the WVDP as Compared to
Background Locations

Analyte	Units	N	SFSPRVL	SFTCORD	Background Locations	
					SFGRVAL	SFNASHV
Gross Alpha	$\mu\text{Ci/g}$	1	9.31 \pm 2.57E-06	8.38 \pm 2.39E-06	6.81 \pm 2.22E-06	2.94 \pm 1.50E-06
Gross Beta	$\mu\text{Ci/g}$	1	1.54 \pm 0.18E-05	2.66 \pm 0.24E-05	1.81 \pm 0.19E-05	1.04 \pm 0.15E-05
K-40	$\mu\text{Ci/g}$	1	1.28 \pm 0.16E-05	2.18 \pm 0.26E-05	1.13 \pm 0.13E-05	1.56 \pm 0.16E-05
Co-60	$\mu\text{Ci/g}$	1	0.33 \pm 1.23E-08	-0.94 \pm 1.73E-08	0.37 \pm 1.41E-08	0.55 \pm 1.31E-08
Sr-90	$\mu\text{Ci/g}$	1	8.49 \pm 1.81E-08	3.26 \pm 2.07E-08	1.95 \pm 0.23E-07	0.68 \pm 2.30E-08
Cs-137	$\mu\text{Ci/g}$	1	4.41 \pm 0.50E-07	1.95 \pm 0.39E-07	7.81 \pm 1.02E-07	5.71 \pm 2.30E-08
Pu-238	$\mu\text{Ci/g}$	1	1.38 \pm 0.99E-08	-1.37 \pm 4.67E-09	0.00 \pm 3.16E-09	2.95 \pm 4.08E-09
Pu-239/240	$\mu\text{Ci/g}$	1	1.53 \pm 1.53E-08	6.87 \pm 8.07E-09	2.41 \pm 1.97E-08	0.00 \pm 7.06E-09
Am-241	$\mu\text{Ci/g}$	1	0.98 \pm 1.28E-08	2.40 \pm 2.35E-08	2.91 \pm 2.70E-08	0.00 \pm 9.65E-09

Analyte	Units	N	SFBLKST	SFWEVAL	Background Locations	
					SFGRVAL	SFNASHV
Gross Alpha	$\mu\text{Ci/g}$	1	9.79 \pm 3.14E-06	6.70 \pm 2.45E-06	6.81 \pm 2.22E-06	2.94 \pm 1.50E-06
Gross Beta	$\mu\text{Ci/g}$	1	1.81 \pm 0.22E-05	1.47 \pm 0.19E-05	1.81 \pm 0.19E-05	1.04 \pm 0.15E-05
K-40	$\mu\text{Ci/g}$	1	1.71 \pm 0.22E-05	1.23 \pm 0.13E-05	1.13 \pm 0.13E-05	1.56 \pm 0.16E-05
Co-60	$\mu\text{Ci/g}$	1	0.08 \pm 1.45E-08	1.10 \pm 1.35E-08	0.37 \pm 1.41E-08	0.55 \pm 1.31E-08
Sr-90	$\mu\text{Ci/g}$	1	4.12 \pm 2.38E-08	9.14 \pm 2.05E-08	1.95 \pm 0.23E-07	0.68 \pm 2.30E-08
Cs-137	$\mu\text{Ci/g}$	1	2.57 \pm 0.52E-07	2.79 \pm 0.41E-07	7.81 \pm 1.02E-07	5.71 \pm 2.30E-08
Pu-238	$\mu\text{Ci/g}$	1	7.25 \pm 6.35E-09	2.72 \pm 5.33E-09	0.00 \pm 3.16E-09	2.95 \pm 4.08E-09
Pu-239/240	$\mu\text{Ci/g}$	1	1.01 \pm 1.10E-08	1.76 \pm 1.03E-08	2.41 \pm 1.97E-08	0.00 \pm 7.06E-09
Am-241	$\mu\text{Ci/g}$	1	1.28 \pm 1.56E-08	2.93 \pm 2.57E-08	2.91 \pm 2.70E-08	0.00 \pm 9.65E-09

N - Number of samples

Table G-2E
2002 Radioactivity Concentrations ($\mu\text{Ci/g}$ dry weight from upper 5 cm)
in Stream Sediments Around the WVDP as Compared to Background Locations

Analyte	Units	N	SFCCSED	SFSDSED	Background Location SFBISED
Gross Alpha	$\mu\text{Ci/g}$	1	9.66 \pm 2.98E-06	5.85 \pm 2.12E-05	9.04 \pm 2.85E-06
Gross Beta	$\mu\text{Ci/g}$	1	1.54 \pm 0.20E-05	1.22 \pm 0.18E-05	1.52 \pm 0.20E-05
K-40	$\mu\text{Ci/g}$	1	1.58 \pm 0.20E-05	1.21 \pm 0.14E-05	1.53 \pm 0.20E-05
Co-60	$\mu\text{Ci/g}$	1	0.34 \pm 2.43E-08	0.46 \pm 2.36E-08	-0.60 \pm 2.12E-08
Sr-90	$\mu\text{Ci/g}$	1	3.83 \pm 2.28E-08	4.33 \pm 2.20E-08	3.03 \pm 2.35E-08
Cs-137	$\mu\text{Ci/g}$	1	3.06 \pm 0.64E-07	1.46 \pm 0.47E-07	4.59 \pm 2.76E-08
U-232	$\mu\text{Ci/g}$	1	-0.64 \pm 2.25E-08	-1.84 \pm 1.89E-08	0.20 \pm 2.05E-08
U-233/234	$\mu\text{Ci/g}$	1	7.68 \pm 0.79E-07	5.59 \pm 0.63E-07	6.59 \pm 0.69E-07
U-235/236	$\mu\text{Ci/g}$	1	9.70 \pm 3.04E-08	8.06 \pm 2.52E-08	8.99 \pm 2.70E-08
U-238	$\mu\text{Ci/g}$	1	8.10 \pm 0.82E-07	5.33 \pm 0.60E-07	6.95 \pm 0.71E-07
Total U	$\mu\text{g/g}$	1	2.58 \pm 0.04E+00	1.60 \pm 0.02E+00	2.35 \pm 0.03E+00
Pu-238	$\mu\text{Ci/g}$	1	-0.14 \pm 6.55E-09	3.81 \pm 8.82E-09	0.47 \pm 1.66E-08
Pu-239/240	$\mu\text{Ci/g}$	1	7.34 \pm 8.55E-09	0.08 \pm 1.27E-08	0.31 \pm 1.15E-08
Am-241	$\mu\text{Ci/g}$	1	1.50 \pm 1.14E-08	7.86 \pm 9.60E-09	0.86 \pm 1.30E-08

Analyte	Units	N	SFTCSSED	--	Background Location SFBCSED
Gross Alpha	$\mu\text{Ci/g}$	1	8.21 \pm 2.56E-06	--	6.42 \pm 2.50E-06
Gross Beta	$\mu\text{Ci/g}$	1	1.37 \pm 0.18E-05	--	1.32 \pm 0.19E-05
K-40	$\mu\text{Ci/g}$	1	1.31 \pm 0.15E-05	--	1.27 \pm 0.16E-05
Co-60	$\mu\text{Ci/g}$	1	1.30 \pm 1.76E-08	--	-0.38 \pm 1.85E-08
Sr-90	$\mu\text{Ci/g}$	1	7.65 \pm 2.60E-08	--	2.59 \pm 2.29E-08
Cs-137	$\mu\text{Ci/g}$	1	8.51 \pm 1.18E-07	--	4.96 \pm 3.40E-08
U-232	$\mu\text{Ci/g}$	1	-0.17 \pm 2.61E-08	--	2.16 \pm 2.65E-08
U-233/234	$\mu\text{Ci/g}$	1	7.42 \pm 0.81E-07	--	6.30 \pm 0.72E-07
U-235/236	$\mu\text{Ci/g}$	1	1.22 \pm 0.36E-07	--	8.88 \pm 2.77E-08
U-238	$\mu\text{Ci/g}$	1	6.71 \pm 0.78E-07	--	5.29 \pm 0.65E-07
Total U	$\mu\text{g/g}$	1	2.16 \pm 0.03E+00	--	2.24 \pm 0.03E+00
Pu-238	$\mu\text{Ci/g}$	1	2.35 \pm 9.61E-09	--	-0.62 \pm 1.41E-08
Pu-239/240	$\mu\text{Ci/g}$	1	-0.78 \pm 6.33E-09	--	0.00 \pm 1.20E-08
Am-241	$\mu\text{Ci/g}$	1	2.09 \pm 1.22E-08	--	1.16 \pm 0.93E-08

N - Number of samples

-- Not applicable; no additional sampling location